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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,898	03/01/2004	Todd R. Williams	56523US009	2585

32692 7590 09/06/2005

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EXAMINER
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SIMONE, CATHERINE A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

43

<b>Office Action Summary</b>	<b>Application No.</b> 10/790,898	<b>Applicant(s)</b> WILLIAMS ET AL.	
	<b>Examiner</b> Catherine Simone	<b>Art Unit</b> 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/22/04 &amp; 4/30/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11 and 13-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Lu (US 5,468,540).

Regarding claims 1 and 11, Lu discloses a composite article having large scale predictable dimensional stability comprising a metal foil backing having a back surface and an opposite front surface (Fig. 1, #17); and a layer of a radiation cured polymer having an exposed front surface bearing a three-dimensional microstructure of precisely shaped and located interactive functional discontinuities including distal surface portions and adjacent depressed surface portions (Fig. 1, #14) and an opposite surface in adherent contact with the front surface of the backing (see col. 3, lines 60-64). Regarding claims 2, 9, 13 and 20, the metal foil backing comprises aluminum (see col. 10, line 46). Regarding claims 3 and 14, the radiation cured polymer is a cured oligomeric resin (see col. 8, line 1). Regarding claims 4 and 15, the metal foil backing is inherently e-beam radiation transmissive since it is aluminum (see col. 10, line 46).

Regarding claims 4-6 and 15-17, the limitations “is cured by electron beam radiation”, “is cured by actinic radiation” and “is cured by thermal radiation” are methods of production and therefore do not determine the patentability of the product itself. Process limitations are given

little or no patentable weight. The method of forming the product is not germane to the issue of patentability of the product itself. MPEP 2113.

Regarding claims 7, 8, 10, 18, 19, 21 and 22, the recitations “shaped for receiving and holding complementarily shaped articles” (claims 7 and 18), “shaped to receive gyricon spheres” (claims 8 and 19), “shaped to receive conductive spheroids” (claims 10 and 21) and “shaped to provide an article which is useful as an etch mask (claim 22) are all recitations of intended use and it has been held that a recitation with respect to the manner in which a claimed product is intended to be employed does not differentiate the claimed product from a prior art product satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu (US 5,468,540).

Lu discloses a composite article having large scale predictable dimensional stability comprising a metal foil backing having a back surface and an opposite front surface (Fig. 1, #17); and a layer of a radiation cured polymer having an exposed front surface bearing a three-dimensional microstructure of precisely shaped and located interactive functional discontinuities including distal surface portions and adjacent depressed surface portions (Fig. 1, #14) and an

opposite surface in adherent contact with the front surface of the backing (see col. 3, lines 60-64). However, Lu fails to disclose a distal surface portion distally spaced at least 0.05 mm from an adjacent depressed surface portion and the article having a dimensional change of less than about 100 ppm and 60 ppm. Lu does, however, teach the dimensions of the microlenses formed from the curable resin (see col. 4, lines 13-15 and col. 8, lines 47-63). Therefore, the optimum ranges for the spacing and the dimensional change would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results.

Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the article in Lu to have the distal surface portion distally spaced at least 0.05 mm from the adjacent depressed surface portion and have a dimensional change of less than about 100 ppm and 60 ppm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. *MPEP 2144.05 (II)*.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571)272-1501. The examiner can normally be reached on 9:30-6:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1772

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Catherine A. Simone  
Examiner  
Art Unit 1772  
August 30, 2005



HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

9/1/05